

EXHIBIT T

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

COREPHOTONICS LTD.,
Patent Owner

Declaration of José Sasián, PhD
under 37 C.F.R. § 1.68

TABLE OF CONTENTS

I.	INTRODUCTION	6
II.	QUALIFICATIONS AND PROFESSIONAL EXPERIENCE	9
III.	LEVEL OF ORDINARY SKILL IN THE ART	13
IV.	RELEVANT LEGAL STANDARDS	14
	A. Anticipation.....	15
	B. Obviousness	15
V.	OVERVIEW OF THE '647 PATENT	17
	A. Summary of the Patent.....	17
	B. Priority Date of the '647 Patent	21
	C. Prosecution History of the '647 Patent.....	22
VI.	CLAIM CONSTRUCTION	23
VII.	IDENTIFICATION OF HOW THE CLAIMS ARE UNPATENTABLE....	24
	A. Claims 1-3 and 5 are obvious over Iwasaki.....	24
	1. Summary of Iwasaki	24
	2. Detailed Analysis	27
	B. Claims 1 and 4 are obvious over the combination of Ogino	42
	1. Summary of Ogino.....	42
	2. Summary of Chen II.....	45
	3. Reasons to combine Ogino and Chen II	48
	4. Detailed Analysis	58
	C. Claims 2, 3, 5, and 8-11 are obvious over the combination of Ogino, Chen II, and Bareau.	72
	1. Summary of Bareau.....	72

2.	Reasons to combine Ogino, Chen II, and Bareau	74
3.	Detailed Analysis	80
D.	Claim 6 is rendered obvious over the combination of Ogino, Chen II, Bareau, and Kingslake	95
1.	Summary of Kingslake.....	95
2.	Reasons to combine Ogino, Bareau, and Kingslake	96
3.	Detailed Analysis	100
E.	Claim 7 is rendered obvious over the combination of Hsieh and Beich.	102
1.	Summary of Hsieh.....	102
2.	Summary of Beich.....	104
3.	Reasons to combine Hsieh and Beich.....	106
4.	Detailed Analysis	108
F.	Claim 12 is obvious over the combination of Chen, Iwasaki, and Beich.	119
1.	Summary of Chen	120
2.	Summary of Iwasaki	121
3.	Reasons to combine Chen and Iwasaki.....	122
4.	Reasons to combine Chen and Beich.....	124
5.	Detailed Analysis	127
VIII.	CONCLUSION.....	142
IX.	APPENDIX.....	143
A.	Fig. 1: Ogino Example 5 using Zemax (v. 02/14/2011).....	143
1.	Fig. 1A – Ray Trace Diagram.....	143
2.	Fig. 1B – Relative Illumination.....	144

3.	Fig. 1C – Analysis.....	145
1.	Fig. 1D – Prescription Data.....	146
B.	Fig. 2: Ogino Example 5 modified for L2 meniscus shape using Zemax (v. 02/14/2011).....	147
1.	Fig. 2A – Ray Trace Diagram.....	147
2.	Fig. 2B – Relative Illumination at F/3.94 at CRA=31.8°	148
3.	Fig. 2C – Analysis.....	149
4.	Fig. 2D – Prescription Data.....	150
C.	Fig. 3: Ogino Example 5 modified for meniscus L2 and F#=2.8 using Zemax (v. 02/14/2011)	151
1.	Fig. 3A – Ray Trace Diagram.....	151
2.	Fig. 3B – Relative Illumination at F/2.8 and CRA=37.9°	152
3.	Fig. 3C – Analysis.....	153
4.	Fig. 3D – Prescription Data.....	154
D.	Fig. 4: Ogino Example 5 modified for second meniscus lens, F#=2.8, and D7 distance adjusted for D7/f<0.2 using Zemax (v. 02/14/2011)	155
1.	Fig. 4A – Ray Trace Diagram.....	155
2.	Fig. 4B – Relative Illumination at F/2.8 and CRA 30.1°.....	156
3.	Fig. 4C – Analysis.....	157
4.	Fig. 4D – Prescription Data.....	158
E.	Fig. 5: Ogino Example 5 modified for meniscus L2 and F#=2.45 using Zemax (v. 02/14/2011)	159
1.	Fig. 5A – Ray Trace Diagram.....	159
2.	Fig. 5B – Relative Illumination.....	160
3.	Fig. 5C – Analysis.....	161

4.	Fig. 5D – Prescription Data.....	162
F.	Fig. 6: Hsieh Example 1 using Zemax (v. 02/14/2011).....	163
1.	Fig. 6A – Ray Trace Diagram.....	163
2.	Fig. 6B – Relative Illumination.....	164
3.	Fig. 6C – Analysis.....	165
4.	Fig. 6D – Prescription Data.....	166
5.	Fig. 6E – Edge Data	167
G.	Fig. 7: Chen Example 1 modified with 0.145 mm IR filter using Zemax (v. 02/14/2011).....	168
1.	Fig. 7A – Ray Trace Diagram.....	168
2.	Fig. 7B – Relative Illumination.....	169
3.	Fig. 7C – Analysis.....	170
4.	Fig. 7D – Prescription Data.....	171
5.	Fig. 7E – Edge Data	172
H.	Fig. 8: Iwasaki Example 1 using Zemax (v. 02/14/2011)	173
1.	Fig. 8A – Ray Trace Diagram.....	173
2.	Fig. 8B – Prescription Data.....	174

book “Introduction to Lens Design.” By Cambridge University Press, 2019. I am named as an inventor on approximately 13 U.S. patents.

17. My *curriculum vitae* (APPL-1004), includes a more detailed summary of my background, experience, and publications.

III. LEVEL OF ORDINARY SKILL IN THE ART

18. I understand there are multiple factors relevant to determining the level of ordinary skill in the pertinent art, including (1) the levels of education and experience of persons working in the field at the time of the invention; (2) the sophistication of the technology; (3) the types of problems encountered in the field; and (4) the prior art solutions to those problems.

19. I am familiar with multi-lens optical systems (including those found in portable devices such as mobile phones). I am also aware of the state of the art at the time the application resulting in the '647 Patent was filed. I have been informed by Apple's counsel that the earliest alleged priority date for the '647 Patent is July 4, 2013. Based on the technologies disclosed in the '647 Patent, I believe that a person having ordinary skill in the art (“POSITA”) would include someone who had, at the priority date of the '647 Patent, (i) a Bachelor's degree in Physics, Optical Sciences, or equivalent training, as well as (ii) approximately three years of experience in designing multi-lens optical systems. Such a person would have had experience in analyzing, tolerancing, adjusting, and optimizing

multi-lens systems for manufacturing, and would have been familiar with the specifications of lens systems and their fabrication. In addition, a POSITA would have known how to use lens design software such as Codev, Oslo, or Zemax, and would have taken a lens design course or had equivalent training.

20. Lack of work experience could have been remedied by additional education, and vice versa. Such academic and industry experience would be necessary to appreciate what was obvious and/or anticipated in the industry and what a POSITA would have thought and understood at the time. Based on these criteria, as of the relevant time frame for the '647 Patent, I possessed at least such experience and knowledge of a POSITA. Some of my past students would have qualified as POSITAs, hence am qualified to opine on the '647 Patent.

21. For purposes of this Declaration, in general, and unless otherwise noted, my statements and opinions, such as those regarding my experience and the understanding of a POSITA generally (and specifically related to the references I consulted herein), reflect the knowledge that existed in the field as of July 4, 2013. Unless otherwise stated, my understanding and analysis below is consistent with the level of a POSITA prior to the priority date of the '647 Patent.

IV. RELEVANT LEGAL STANDARDS

22. I understand that prior art to the '647 Patent includes patents and printed publications in the relevant art that predate the priority date of the alleged